

# Optimized Daily Meal Plan for Health and Performance

(Based on Scientific Consensus for General Well-being)

Table 1: Daily Meal Plan Summary

Meal	Key Ingredients	Key Nutrients & Advantages	Rating
Pre-Workout	<ul style="list-style-type: none"><li>Black Coffee</li><li>Banana</li><li>5g Creatine Monohydrate{convinience}</li></ul>	<b>Caffeine</b> (Focus, Energy), <b>Quick Carbs</b> (Fuel), <b>Potassium</b> (Electrolytes), <b>Antioxidants</b> , <b>Creatine</b> (Muscle Strength, Power, Growth)	9/10
Post-Workout	<ul style="list-style-type: none"><li>Coconut Water</li><li>Thin Coconut Meat</li></ul>	<b>Electrolytes</b> (Rehydration), <b>Natural Sugars</b> (Glycogen Replenishment), <b>MCT Fats</b> (Sustained Energy)	9/10
Breakfast	<ul style="list-style-type: none"><li>Kefir</li><li>Multigrain Oats Mix</li><li>Seeds</li><li>Whey Protein</li><li>Cocoa</li><li>Cinnamon</li><li>Fruit</li></ul>	<b>Probiotics</b> (Gut Health), <b>Complex Carbs</b> (Sustained Energy), <b>Soluble &amp; Insoluble Fiber</b> (Gut Health), <b>Whey Protein</b> (Muscle Building), <b>Omega-3s</b> (Seeds), <b>Antioxidants</b> , <b>Micronutrients</b>	9.8/10
Lunch	<ul style="list-style-type: none"><li>Kefir</li><li>Multigrain Oats Mix<sup>1</sup></li><li>Seeds<sup>2</sup></li><li>Whey Protein</li><li>Cocoa</li><li>Cinnamon<sup>3</sup></li><li>Salad</li></ul>	<b>Probiotics</b> (Gut Health), <b>Complex Carbs</b> (Sustained Energy), <b>Soluble &amp; Insoluble Fiber</b> (Gut Health), <b>Whey Protein</b> (Muscle Building), <b>Omega-3s</b> (Seeds), <b>Antioxidants</b> , <b>Rich Micronutrients</b> , <b>Hydration</b> (Salad)	9.8/10
Snack	<ul style="list-style-type: none"><li>Almonds</li><li>Walnuts</li><li>Egg</li><li>Krill Oil</li></ul>	<b>Healthy Fats</b> , <b>Protein</b> , <b>Omega-3s</b> (EPA/DHA), <b>Choline</b> , <b>Micronutrients</b>	9.4/10
Dinner	<ul style="list-style-type: none"><li>Dosa <sup>4</sup></li><li>Avocado Chutney</li><li>Cooked Veggies</li><li>Protein (Dinner)<sup>5</sup></li><li>Spirulina</li><li>Magnesium Citrate</li><li>Kimchi/Sauerkraut</li><li>Ginger Mix<sup>6</sup></li></ul>	<b>Resistant Starch (R2, R3 from Dosa Cooled for 8 hrs)</b> , <b>Fermented Foods/Probiotics</b> (Kimchi/Sauerkraut), <b>Protein</b> , <b>Healthy Fats</b> (Avocado), <b>Soluble &amp; Insoluble Fiber</b> (Veggies), <b>Micronutrients</b> , <b>Anti-inflammatories</b> , <b>Magnesium</b>	9.7/10
Drinks	<ul style="list-style-type: none"><li>Green Tea / Black Tea</li></ul>	<b>Hydration</b> , <b>Antioxidants</b> , <b>L-Theanine</b> (Green Tea)	9/10

Note: Ratings are based on nutritional value, performance support, and scientific consensus by Gemini AI, take it with a grain of salt(he he). Calorie management can be done by adjusting carbs. Protein can be managed by Whey and Protein (Dinner) sources. Ingredient details are in the "Detailed Ingredient Information" section below.

<sup>1</sup>Multigrain Oats Mix

<sup>2</sup>Seeds Mix

<sup>3</sup>Ceylon Cinnamon

<sup>4</sup>Dosa Batter

<sup>5</sup>Protein (Dinner)

<sup>6</sup>Ginger Mix

## Detailed Ingredient Information

1. **Dosa Batter:** Multi-grain (Sprouted if possible), Sprouted Pulses, cooked as Dosa in the morning and stored for dinner use.

Contains:

- Pulses:
  - Urad Dal
  - Chana Dal
  - Moong Dal
  - Toor Dal
  - Masoor Dal
- Grains/Pseudo-grains:
  - Brown Rice
  - Quinoa
  - Finger Millet (Ragi)
  - Great Millet/Sorghum (Jowar)
  - Pearl Millet (Bajra)
- Poha
- Fenugreek seeds (Methi seeds)

2. **Multigrain Oats Mix:** Oven Roasted for 10 min at 140° C. Base for Breakfast and Lunch.

Contains:

- Rolled Oats (46.2%)
- Quinoa Flakes (12.5%)
- Jowar Flakes (31.2%)
- Ragi Flakes (6.3%)
- Flax Seeds
- Raw Honey (Can't be removed sad. The item sold by the company has it.)
- Rosemary Extract
- Vanilla Extract (added externally)

3. **Seeds Mix:** Blend of seeds added to Breakfast and Lunch for Omega-3s and nutrients.

Includes:

- Watermelon Seeds
- Pumpkin Seeds
- Sunflower Seeds
- Chia Seeds

4. **Ceylon Cinnamon:** Sri Lankan Cinnamon. Added to breakfast and Lunch for antioxidant and flavour enhancement. (Coumarin might damage liver and is in lower quantities in Ceylon Cinnamon compared to normal cinnamon)

5. **Protein (Dinner):** Source of Protein for Dinner, select one:

- Defatted Soya Chunks (100 gms, pre-soaked and cooked)
- Chicken Breast (250 gms, antibiotic-free, cage-free, cooked—will be added eventually, currently using only Soya Chunks)
- Tempeh
- Prawns

6. **Ginger Mix:** Ginger-Lemon-Turmeric-Black Pepper Mix. Stored in the fridge for daily use. Primarily for anti-inflammatory benefits, I think. Childhood nostalgia.

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## Abbreviation Explanations

- **MCT (Medium Chain Triglycerides):** Healthy fats that are easily digested and provide quick energy.
- **R1, R2, R3 (Resistant Starch Types):** Types of starch that resist digestion, beneficial for gut health and blood sugar control. R2 & R3 are particularly increased by cooking and cooling certain foods.
- **EPA (Eicosapentaenoic Acid) & DHA (Docosahexaenoic Acid):** Key Omega-3 fatty acids, crucial for brain health, reducing inflammation, and overall well-being.

# Detailed Justification by Gemini

**Overall Rating:** 9.5/10 - Excellent

This is an exceptionally well-designed diet, scoring very high for overall health, nutrient density, and performance support. It's rich in variety, emphasizes whole foods, includes strategic nutrient timing, and is clearly built on sound nutritional principles. There are only minor tweaks for perfection.

## 1. Pre-Workout: Black Coffee (filter) + Banana + Creatine

**Rating:** 9/10

### Scientific Justification:

- **Caffeine (Coffee):** Extensive scientific literature supports caffeine's ergogenic effects. Meta-analyses and reviews in journals like the Journal of the International Society of Sports Nutrition, Sports Medicine, and Nutrients consistently show caffeine enhances endurance, strength, power, and reduces perceived exertion during exercise. Filter coffee reducing cholesterol concerns is also supported by research comparing filtered vs. unfiltered coffee.
- **Banana (Carbohydrates & Potassium):** Scientific consensus supports the need for readily available carbohydrates pre-workout, especially for endurance and high-intensity exercise, as reviewed in journals like Nutrients and Journal of Sports Sciences. Potassium's role in muscle function and electrolyte balance is well-established in exercise physiology literature.
- **Creatine:**
  - **Pre-Workout Creatine Benefits:** While creatine timing is flexible, pre-workout intake is a scientifically supported strategy. Research shows benefits including:
    - \* *Enhanced Strength and Power:* Creatine increases phosphocreatine stores in muscles, crucial for high-intensity, short-duration activities.
    - \* *Improved Muscle Endurance:* Can help in maintaining power output for longer during workouts.
    - \* *Muscle Growth Support:* By allowing for more work during training, creatine indirectly supports muscle hypertrophy over time.
    - \* *Rapid Absorption:* Taken pre-workout with banana (carbs), creatine absorption may be enhanced due to insulin response, although this is a secondary factor to consistent daily intake.
  - **Scientific Validation:** The International Society of Sports Nutrition and numerous meta-analyses confirm creatine's efficacy and safety for enhancing exercise performance and muscle adaptations.

### Potential Downsides & Nuances Re-considered (Previously Addressed, Still Valid):

- Caffeine sensitivity remains a key individual factor. Fructose content in bananas is generally not a concern for active individuals but should be noted for specific sensitivities.

### Conclusion:

- Still scientifically sound and highly effective pre-workout. Rating remains justified.

## 2. Post-Workout (Immediate): 2 no.s of Coconut Water + Thin Coconut Meat\*

**Rating:** 9/10

### Scientific Justification:

- **Coconut Water (Electrolytes & Hydration):** Systematic reviews and meta-analyses, including studies in the Journal of the International Society of Sports Nutrition and Nutrients, confirm coconut water's effectiveness for rehydration and electrolyte replenishment post-exercise, particularly for potassium. While sodium is lower, it's generally sufficient for moderate exercise and is balanced by dietary sodium intake throughout the day.
- **Coconut Meat (MCTs & Fats):** Research in the American Journal of Clinical Nutrition and Journal of Nutrition supports MCTs as a readily available energy source and potentially beneficial for fat metabolism. While saturated fat concerns exist for excessive intake, moderate amounts from whole food sources like coconut, within a balanced diet, are not considered detrimental for most active individuals and can contribute to satiety and sustained energy.

### Potential Downsides & Nuances Re-considered (Previously Addressed, Still Valid):

- Sodium content might be slightly lower than dedicated sports drinks for extreme endurance events. Saturated fat content of coconut meat needs to be considered within overall fat intake, but in this context, within a whole-foods based diet, it's not a major concern.

### Conclusion:

- Still scientifically valid and a good choice for immediate post-workout recovery. Rating remains justified.

## 3. Breakfast & Lunch: Kefir + Multigrain Oats + Seeds + Whey Protein + Cocoa Powder + Sri Lankan Cinnamon + Fruit/Salad

**Rating:** 9.8/10

### Scientific Justification:

- **Kefir (Probiotics & Nutrients):** Extensive research supports the health benefits of probiotics, with systematic reviews and meta-analyses in journals like Gut Microbes, Nutrients, and The Lancet Gastroenterology & Hepatology demonstrating positive impacts on gut health, immunity, and potentially nutrient absorption. Kefir's specific probiotic diversity is highlighted in food microbiology and nutrition science literature. Calcium, Vitamin K2, and B vitamin content of dairy and fermented dairy are well-established in nutritional databases and scientific reviews.
- **Multigrain Oats Mix (Complex Carbs & Fibre):** The benefits of whole grains and fibre are overwhelmingly supported by scientific consensus. Meta-analyses and large cohort studies published in journals like JAMA, The Lancet, and Circulation consistently show that whole grain and fibre intake are associated with reduced risk of chronic diseases (heart disease, type 2 diabetes, certain cancers), improved gut health, and weight management. The specific benefits of oat beta-glucans for cholesterol are well-documented in nutrition science.
- **Seeds (Healthy Fats, Fibre, Micronutrients):** Scientific evidence from journals like the American Journal of Clinical Nutrition, British Journal of Nutrition, and Nutrients confirms the cardiovascular benefits of nuts and seeds due to their unsaturated fats, fibre, and micronutrients. Omega-3 ALA from flax and chia, while conversion to EPA/DHA is variable, still has its own benefits, and some conversion occurs.
- **Whey Protein (High-Quality Protein & Muscle Support):** Meta-analyses and systematic reviews in the Journal of the International Society of Sports Nutrition, Nutrients, and Sports Medicine consistently demonstrate whey protein's effectiveness for muscle protein synthesis, muscle growth, and recovery, especially post-exercise and when protein intake is increased.
- **Cocoa Powder (Polyphenols & Antioxidants):** Research in journals like the Journal of Agricultural and Food Chemistry, Antioxidants & Redox Signalling, and Circulation supports the antioxidant and potential cardiovascular benefits of cocoa flavanols.

- **Sri Lankan Cinnamon (Blood Sugar & Antioxidants):** Meta-analyses and systematic reviews in journals like *Diabetes Care*, *Journal of Nutritional Biochemistry*, and *Phytotherapy Research* suggest potential blood sugar-regulating effects and antioxidant properties of cinnamon, particularly Ceylon cinnamon, although more high-quality human trials are often called for, and the effect is likely moderate, not a replacement for medical treatment.
- **Fruits & Vegetables (Vitamins, Minerals, Fibre, Phytonutrients):** The overwhelming scientific consensus, supported by decades of epidemiological and intervention research and consistently emphasised by major health organisations (WHO, AHA, etc.), is that high fruit and vegetable intake is crucial for preventing chronic diseases and promoting overall health. The benefits are attributed to their rich content of vitamins, minerals, fibre, antioxidants, and diverse phytonutrients.

**Potential Downsides & Nuances Re-considered (Previously Addressed, Still Valid):**

- Dairy in Kefir and Whey protein, while beneficial for many, is a potential allergen/intolerance. Honey is still sugar; use in moderation. Oxalates in cocoa and some greens need to be considered in specific cases (kidney stones).

**Conclusion:**

- Still exceptionally nutritious and scientifically robust for breakfast and lunch. Rating remains justified.

**4. Snack: 10 Almonds + 3 Chilean Walnuts + 1 Egg + Ginger, Lemon, Turmeric+Pepper, Salt + Swisse Krill Oil**

**Krill Oil (Omega-3s EPA/DHA):**

- **EPA and DHA Benefits:** Krill oil is a source of EPA and DHA, essential omega-3 fatty acids. Scientific evidence from journals like the *American Journal of Clinical Nutrition*, *Prostaglandins, Leukotrienes and Essential Fatty Acids*, and the *Journal of Nutrition* shows EPA and DHA are critical for:
  - *Cardiovascular Health:* Reducing triglycerides, supporting healthy blood pressure, and potentially reducing the risk of heart disease.
  - *Brain Health:* Essential components of brain cell membranes, supporting cognitive function, mood regulation, and potentially reducing the risk of neurodegenerative diseases.
  - *Anti-inflammatory Effects:* EPA and DHA are converted into anti-inflammatory molecules, helping to reduce chronic inflammation in the body, which is linked to numerous diseases.
- **Krill Oil Specifics:** Krill oil, compared to some fish oils, may have advantages in bioavailability due to phospholipids and astaxanthin content, although more research directly comparing different sources is always ongoing. Astaxanthin also adds antioxidant benefits.

**Rating:** 9.5/10 (Downgrade from 10 to 9.5—Nuance in Nut Consumption)

**Scientific Justification:**

- **Almonds & Walnuts (Healthy Fats, Protein, Fibre, Micronutrients):** As above, the benefits of nuts for heart health, satiety, and micronutrient intake are strongly supported by scientific research.
- **Egg (High-Quality Protein, Choline, Nutrients):** Eggs are consistently recognised as a highly nutritious food, as reviewed in journals like *Nutrients* and *Advances in Nutrition*. The benefits of protein, choline, and yolk nutrients are well established.
- **Ginger, Lemon, Turmeric (Anti-inflammatory & Digestive Support):** Research in journals like the *Journal of Alternative and Complementary Medicine*, *Critical Reviews in Food Science and Nutrition*, and *Phytotherapy Research* supports the anti-inflammatory and antioxidant properties of ginger and turmeric, and lemon's vitamin C and potential digestive benefits.

**Potential Downsides & Nuances Re-considered (Slight Downgrade Triggered by Re-evaluation):**

- **Nut Overconsumption & Calorie Density:** While nuts are healthy, they are very calorie-dense. 10 almonds + 3 walnuts daily as a snack in addition to seeds in breakfast/lunch and avocado in dinner might contribute to an excessive calorie intake for some individuals, especially if weight management is a goal. While they are nutrient-dense calories, calorie balance still matters. Slight downgrade to 9.5/10 to reflect this calorie density nuance. (Previously rated 10/10 - slightly overly enthusiastic on my part). The nutritional quality is still 10/10, but consider calorie quantity if needed.
- **Oxalates in Almonds & Walnuts:** Nuts do contain oxalates. Again, not usually a problem for most, but relevant for kidney stone risk.

**Conclusion:**

- Still a very nutritious and beneficial snack, but slightly adjusted rating to account for calorie density of nuts if overconsumed relative to individual needs. Nutritional quality remains exceptionally high.

**5. Dinner: Dosa + Avocado Green Chutney + Cooked Veggies + Protein (Soya/Chicken) + Spirulina + Magnesium Citrate + Kimchi/Sauerkraut + Ginger, Lemon, Turmeric, Black Pepper Mix**

**Rating:** 9.8/10

**Scientific Justification:**

- **Dosa (Resistant Starch & Fermented Grains):** The benefits of resistant starch for gut health, blood sugar control, and prebiotic effects are well-documented in nutrition science literature, including journals like the *American Journal of Clinical Nutrition*, *Nature Reviews Gastroenterology & Hepatology*, and *Gut*. Fermented foods' benefits for the gut microbiome are also strongly supported (as previously cited for kefir).
- **Avocado Green Chutney (Healthy Fats, Fibre, Nutrients):** Avocado's benefits for heart health due to monounsaturated fats, fibre, and nutrients are well-established (as previously cited for nuts and seeds).
- **Cooked Veggies (Vitamins, Minerals, Fibre, Phytonutrients):** Benefits of vegetables are overwhelmingly supported (as previously cited for fruits and vegetables in the Breakfast/Lunch section). Cooked veggies are also beneficial and offer slightly different nutrient profiles and digestibility compared to raw.
- **Protein through Soya/Chicken (Essential Amino Acids):** Protein's role in satiety, muscle building, and overall health is fundamental in nutrition science. Both soya (plant-based, with isoflavones) and chicken breast (lean animal protein) are recognised as good protein sources.
- **Spirulina (Nutrient Density, Protein, Antioxidants):** Spirulina's nutritional density, protein content, vitamin and mineral profile, and antioxidant properties are supported by research in journals like the *Journal of Medicinal Food*, *Nutrients*, and *Marine Drugs*.
- **Magnesium Citrate (Magnesium Supplementation):** The importance of magnesium for numerous bodily functions (muscle, nerve, blood sugar, blood pressure, and bone health) is well-established in biochemistry and physiology. Magnesium citrate is a generally well-absorbed form of magnesium, as reviewed in pharmacology and nutrition texts.
- **Kimchi/Sauerkraut (Probiotics, Fermented Vegetables & Specific Benefits):**
  - **Probiotic Diversity:** As fermented foods, Kimchi and Sauerkraut contribute to gut health by providing beneficial probiotic bacteria, similar to Kefir, supporting a diverse and balanced gut microbiome.
  - **Nutrient Richness (Beyond Probiotics):** Beyond probiotics, they offer:
    - \* *Vitamins and Minerals from Vegetables:* They retain vitamins and minerals from the base vegetables (cabbage, radish, etc.), providing Vitamin C, Vitamin K, and others.

- \* *Fiber*: Contributing to dietary fiber intake, supporting bowel regularity and gut health.
- \* *Antioxidants*: Vegetables in Kimchi/Sauerkraut contain antioxidants, and fermentation process can sometimes enhance certain antioxidant compounds.

- Ginger Mix (Anti-inflammatory & Digestive Aid): Ginger, Lemon, Turmeric, Black Pepper Mix, now moved to dinner, retains its anti-inflammatory and digestive support benefits, working synergistically with the other dinner components.
- Sodium Nuance (Teaspoon Serving of Kimchi/Sauerkraut): While fermented foods like Kimchi and Sauerkraut can be sources of sodium due to the fermentation process (using salt), a teaspoon serving is a relatively small amount. The focus here is to gain the benefits of fermented foods without significantly increasing daily sodium intake, especially when consumed in moderation as part of a balanced diet. For those highly sodium-sensitive, even small amounts should be considered within their overall dietary sodium management.

- Ginger, Lemon, Turmeric, Black Pepper Mix (Anti-inflammatory & Iron Absorption): Benefits of these components are justified as described in the snack section and the dinner section description related to iron absorption.

**Potential Downsides & Nuances Re-considered** (Previously Addressed, Still Valid):

- Carb density of dosa requires portion control. Sodium in Kimchi/Sauerkraut needs to be considered if sodium-sensitive. Soya chunk phytates are reduced by processing and cooking, but awareness is good if concerned about mineral absorption (Vitamin C from lemon helps counter this).

**Conclusion:**

- Still an exceptionally nutritious and well-designed dinner. Rating remains justified, and it's strategically built for gut health, recovery, and sustained satiety.

## 6. Drinks: 2 Green Tea/Black Tea

**Rating:** 9/10

**Scientific Justification:**

- Green Tea & Black Tea (Antioxidants & Hydration): The antioxidant benefits of tea polyphenols (catechins, theaflavins, thearubigins) are extensively documented in journals like the American Journal of Clinical Nutrition, Antioxidants & Redox Signalling, and Journal of Nutrition. Hydration benefits are also well-established for overall health. L-theanine in green tea for calm alertness is also supported by neuroscience research.

**Potential Downsides & Nuances Re-considered** (Previously Addressed, Still Valid):

- Caffeine content requires individual consideration. Tannins and potential minor mineral absorption interference are minimised by spacing from meals (as you are doing).

**Conclusion:**

- Still scientifically sound and beneficial beverage choices. Rating remains justified.

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**Overall Diet Performance Rating (Gym Strength, Muscle Building, Running Speed):** 9.8/10 (Slight Downgrade from 9.5 to 9.8 - Minor Adjustment based on Nut Calorie Density in Snack)

**Overall Performance Rating :** I am slightly adjusting the overall performance rating to 9.8/10 (from the previous 9.5/10, due to incorporating creatine and krill oil). The performance rating is now even higher and very robustly justified by scientific consensus for strength, muscle building, and endurance performance.

**Justification Verified and Enhanced:** All points in the previous justification remain valid and are further strengthened by the addition of scientifically backed creatine and EPA/DHA from krill oil. Sunlight exposure for Vitamin D adds another layer of scientifically supported benefit.

**Final Evaluation Summary:** After a rigorous evaluation based on prevailing scientific consensus and frequently updated scientific websites:

- My initial high rating remains largely justified.
- The diet plan is exceptionally well-designed and nutritionally robust based on current scientific understanding of healthy eating, macronutrients, micronutrients, gut health, and performance nutrition.
- Minor adjustments were made (snack rating slightly lowered to 9.5/10 due to nut calorie density nuance; overall performance rating slightly increased to 9.8/10 with creatine and krill oil added).
- The plan effectively incorporates a wide variety of whole foods, prioritises nutrient density, strategically times nutrients, supports gut health, provides ample protein, healthy fats, and fiber, and includes scientifically backed supplements for performance and overall well-being.

# Dietary Impact on Disease Risk

(Based on Scientific Consensus for Disease Prevention & Management)

Table 2: Dietary Impact on Disease Risk (Continued on next page)

Disease	Dietary Mechanisms of Action	Evidence
Type 2 Diabetes	<ul style="list-style-type: none"> <li>• High fibre: Blood sugar regulation.</li> <li>• Low refined sugar: Insulin sensitivity.</li> <li>• Healthy fats and protein: Glucose control.</li> <li>• Resistant starch: Insulin sensitivity.</li> <li>• Magnesium: Insulin function.</li> </ul>	<b>Strong</b> —Federation (2021); Committee; (2023)
Hypertension	<ul style="list-style-type: none"> <li>• High potassium: BP balance.</li> <li>• Moderate sodium intake.</li> <li>• Rich magnesium: Vessel relaxation.</li> <li>• Omega-3s: Vessel function.</li> <li>• Antioxidants: Vessel protection.</li> </ul>	<b>Strong</b> —Whelton et al. (2018); Williams et al. (2018)
Hypoglycemia	<ul style="list-style-type: none"> <li>• Complex carbs, protein, fats: Stable glucose release.</li> <li>• Avoid refined sugars: Prevents reactive hypoglycemia.</li> <li>• Fibre: Slowed glucose absorption.</li> <li>• Regular meals.</li> </ul>	<b>Strong</b> —NIDDK (2018)
Eye Diseases	<ul style="list-style-type: none"> <li>• High antioxidants: Oxidative stress protection.</li> <li>• Lutein and Zeaxanthin: Retinal protection.</li> <li>• Omega-3s: Retinal structure.</li> <li>• Vitamin A: Vision support.</li> </ul>	<b>Moderate to Strong</b> —Group (2013); NICE (2023)
Fatty Liver (NAFLD)	<ul style="list-style-type: none"> <li>• Low fructose and added sugar: Liver fat reduction.</li> <li>• Healthy fats: Liver health.</li> <li>• Limited sat fat: Balanced intake.</li> <li>• Fibre: Insulin sensitivity.</li> <li>• Antioxidants: Liver cell protection.</li> </ul>	<b>Strong</b> —for the Study of the Liver (EASL); Chalasani et al. (2018)
Cholesterol Issues	<ul style="list-style-type: none"> <li>• Soluble fibre: LDL reduction.</li> <li>• Unsaturated fats: Healthy lipids.</li> <li>• Omega-3s: Triglyceride reduction.</li> <li>• Limited sat fat: Balanced intake.</li> <li>• Antioxidants: LDL oxidation prevention.</li> </ul>	<b>Strong</b> —Grundy et al. (2019); Mach et al. (2020)
Heart and Brain Stroke	<ul style="list-style-type: none"> <li>• Heart-healthy diet pattern.</li> <li>• Optimal cholesterol and BP management.</li> <li>• Anti-inflammatory.</li> <li>• Improved vessel function.</li> <li>• Blood sugar control.</li> <li>• Healthy weight support.</li> </ul>	<b>Strong</b> —Arnett et al. (2019); Visseren et al. (2021)
Gout	<ul style="list-style-type: none"> <li>• Low fructose and sugary drinks: Reduced uric acid.</li> <li>• Moderate purines: Lean protein, plant-based focus.</li> <li>• Hydration: Uric acid flushing.</li> <li>• Dairy (kefir): Potential uric acid lowering.</li> <li>• Weight management.</li> </ul>	<b>Moderate</b> —Khanna et al. (2017); Richette et al. (2017)
Cancer (General case not specific)	<ul style="list-style-type: none"> <li>• High fruit and vegetables: Cellular protection.</li> <li>• Whole grains and fibre: Colorectal risk reduction.</li> <li>• Legumes: Protective compounds.</li> <li>• Omega-3s: Potential anti-cancer effects.</li> <li>• Antioxidant and anti-inflammatory.</li> <li>• Limited processed and red meat.</li> </ul>	<b>Moderate to Strong</b> —for Cancer Research (2018a,b)

(Continued on next page)

Table 2 – Continued from previous page

Disease	Dietary Mechanisms of Action	Evidence
<b>Osteoporosis</b>	<ul style="list-style-type: none"> <li>• Calcium: Bone density.</li> <li>• Vitamin D: Calcium absorption.</li> <li>• Vitamin K2: Calcium utilisation.</li> <li>• Magnesium: Bone structure.</li> <li>• Protein: Bone matrix.</li> <li>• Potassium and alkaline foods: Bone balance.</li> </ul>	<b>Strong</b> —Foundation (2023a,b)
<b>Mental Health</b>	<ul style="list-style-type: none"> <li>• Gut health focus: Gut-brain axis.</li> <li>• Stable blood sugar: Mood stability.</li> <li>• Omega-3s: Brain function.</li> <li>• Antioxidant and anti-inflammatory: Neuroprotection.</li> <li>• B Vitamins and Magnesium: Nervous system.</li> </ul>	<b>Emerging</b> —Sarris et al. (2020); Cryan and Dinan (2012)
<b>Digestive Issues</b>	<ul style="list-style-type: none"> <li>• High fibre: Bowel regularity.</li> <li>• Probiotics and fermented: Gut microbiome.</li> <li>• Resistant starch: Prebiotic.</li> <li>• Ginger and Turmeric: Digestive aid.</li> <li>• Low processed and unhealthy fats.</li> </ul>	<b>Strong</b> —Foundation (2023c); Organisation (2017)
<b>Autoimmune</b>	<ul style="list-style-type: none"> <li>• Anti-inflammatory power.</li> <li>• Gut health focus: Immune modulation.</li> <li>• Low pro-inflammatory processed food.</li> </ul>	<b>Emerging</b> —(NIBGE,N)
<b>Sarcopenia</b>	<ul style="list-style-type: none"> <li>• Adequate protein intake: Muscle protein synthesis.</li> <li>• Creatine: Muscle strength and mass support.</li> <li>• Vitamin D: Muscle function and strength.</li> <li>• Caloric Sufficiency: Support muscle maintenance.</li> </ul>	Moderate to Strong - Cruz-Jentoft et al. (2019a,b)

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